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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,940	02/18/2004	Joel C. Mitchell	LEC01 P427	2291
277	7590	06/02/2005	EXAMINER	
PRICE HENEVELD COOPER DEWITT & LITTON, LLP 695 KENMOOR, S.E. P O BOX 2567 GRAND RAPIDS, MI 49501			LEVKOVICH, NATALIA A	
		ART UNIT		PAPER NUMBER
				1743

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/780,940	MITCHELL ET AL.
	Examiner	Art Unit
	Natalia Levkovich	1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 March 2005.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 10-25 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-9,26-35 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) 1-35 are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 18 February 2004 is/are: a) accepted or b) objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date: _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date: _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

**DETAILED ACTION**

***Response to Amendment***

1. Applicant's amendments and remarks filed February 18, 2005 have been acknowledged by the examiner and entered.

***Claim Rejections - 35 USC § 102***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.
3. Claims 1 –5 and 26-29 are rejected under 35 U.S.C. 102(b) as anticipated by Bredeweg (USP 4,622,009).

See the appropriate paragraphs of the 11/04/2004 Office Action.

***Claim Rejections - 35 USC § 103***

4. Claims 1 –3 and 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Condon (USP 3,698,869) in view of Compton et al. (USP 5,563,339 ).  
See the appropriate paragraphs of the 11/04/2004 Office Action.
5. Claims 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Condon (USP 3,698,869) in view of Compton et al. (USP 5,563,339 ) as applied to claims 1-3 and 26-30 above, and further in view of Cohrs et al. (USP 4,627,267).  
See the appropriate paragraphs of the 11/04/2004 Office Action.

6. Claims 30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bredeweg (USP 4,622,009 ) in view of Compton et al. (USP 5,563,339 ) and further in view of Jones (USP 4,527,436 ), or as being unpatentable over Condon (USP 3,698,869) in view of Compton et al. and further in view of Jones. See the appropriate paragraphs of the 11/04/2004 Office Action.

*Response to Arguments*

7. Applicant's arguments filed on 02/18/2005 have been fully considered but they are not persuasive.

Applicant argues that the Bredeweg reference fails to disclose a variable volume chamber since the apparatus of Bredeweg does not have a sensor for detecting the position of the piston, and that the apparatus of Bredeweg has a piston stop instead of the sensor. The Examiner respectfully notes that Bredeweg does not teach a piston stop. In any event, a piston stop would be considered a sensor because one of ordinary skill would still need conformation of reaching the piston stop. Bredeweg appears to meet the limitations of a movable piston and a position detector.

Applicant argues that the Condon reference teaches a constant (versus variable) volume ballast chamber. As it was discussed in the prior Office Action, Condon, while teaching a constant volume chamber as a preferred embodiment, also discloses an embodiment where the constant volume chamber may be substituted by "piston-controlled changeable volume cylinders" (which was admitted by Applicant in the Remarks), thus making his system capable

of implementing the concept of variable ballast chamber. Condon also teaches detectors allowing to quantify the combustion products and capable of determining the end of combustion process.

Applicant argues that the Compton reference does not teach the system analyzing combustion products but is designed for measuring the vapor pressure of liquid samples, and, therefore, there would be no logical reason to modify the apparatus of Condon with the teaching of Compton. The Examiner respectfully submits that although the apparatus of Compton does not analyze combustion products, the system of Condon does, and means (such as piston position sensors) and methods for calculating a fluid volume correction disclosed by Compton could be successfully employed in the system of Condon, in order to enhance the accuracy of analysis, which would be the motivation to modify the system of Condon.

Applicant argues the modified apparatus of Condon being further modified by the Cohrs reference on the grounds that the invention of Cohrs is designed to measure flow rates and the apparatus disclosed in the instant application is not dependent on flow rate. The Examiner respectfully disagrees with this argument. Cohrs discloses a rotary encoder “coupled to a shaft, to serve as a measuring piston displacement sensor”, with the sensor output being used in the control console (See the prior Office Action). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed the above mentioned sensor in the modified apparatus of Condon, in order to accurately control fluid transfer.

Applicant states that the Jones reference does not suggest any improvement to the modified apparatus of Bredeweg. The Examiner respectfully submits that

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed the outlet control valve disclosed by Jones in the apparatus of Bredeweg in order to re-circulate fluids to the pipeline.

*Conclusion*

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalia Levkovich whose telephone number is 571-272-2462. The examiner can normally be reached on Mon-Fri, 8 a.m.-4p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



ARLEN SODERQUIST  
PRIMARY EXAMINER